

CLAIMS

I Claim:

1. An ergonomically designed walking frame comprising:

An elongated upstanding vertical tubular frame assembly with offset bends with attached support post and seat with padded handle grips. Said adjustable padded handgrip bars are located at the uppermost forward end of said walker frame. This said tubular frame consists mainly of two tubular support members: the generally V-shaped seat support post with said handle assembly and the said offset seat support post located at the upper most vertical end. The said offset frame support post assembly with height adjustable stabilization foot assembly located in lowermost vertical end is comprised of energy absorbing and releasing foam and said stabilization plate for added torsion stability with replaceable tread. The stabilization foot assembly is locked in position with a safety locking collar assembly, has said safety knob with threaded shaft which compress tightly against stabilization foot support tube and offset frame support post this, minimizes wear on the said height adjustment spring button. Located above this safety collar assembly are threaded frame spacers which vary the distance between the two support members by holding them apart to the proper distance giving the said walker frame the proper vertical positioning of the said offset seat post over the said stabilization foot which can also vary in size. Because of these different length frame spacers one standard frame can be adjusted to many different sized people.

These said threaded frame spacers line up with the said welded reinforcement tubes, which are located in both of said support members. Button head bolts pass through the said welded reinforcement tubes and thread into the said female threaded frame spacers. The said leg cradle support and pivot flange assembly with degree markings for consistent adjustment secured with offset button head bolt also offers a vast degree of adjustable pivoting and rotating of said pivot flange joint that positions the injured limb in the said leg cradle for good balance. The said button head bolts can attach the pivoting leg cradle flange to the right or left offset frame ergonomic walker. The said welded reinforcement tubes for strength and rigidity are located in the seat support post and the frame support post. The said adjustable leg cradle support tube with said spring button assembly has a pivoting bracket affixed to the bottom of the

said padded leg cradle. This padded leg cradle may have a Velcro ®strap or a safety breakaway buckle.

The user holds the padded handle grip bars and straddles the seat in an upstanding position. The user will position the walker frame to the perineal area and then place their injured limb in the leg cradle. Depending on the type of injury the ergonomic walker frame allows the user to non weight bear or to selectively weight bear on the injured limb or prosthesis also allowing for extension and flexion of said limb without applying full weight to the said limb. The ergonomically designed walking frame promotes a natural body position and stance with proper placement of joints and body parts thus promoting increased balance and stability utilizing proprioception of the said stabilization foot by means of one's wrists and hands. The user's position on said frame promotes freedom to walk in a more natural way. This said frame always returns the user's uninjured foot to the traveled surface. The stabilization foot is placed under the affected limb in such a way as to support this side of the body mass by the said frame's offset bends. The user has a tendency to move forward on the front of the stabilization foot much like a human foot, which provides a stable comfortable means for ambulating, without the feeling of falling backwards. Because the weight is always focused forward of the heel of said stabilization foot, less energy is expended on ambulating and it is done with more comfort and stability. This said stabilization plate is a rigid flat structure backed up by dense foam, which absorbs the shock of the stabilization foot when it meets the travel surface. The stabilization plate also releases energy from the foam when the stabilization foot leaves the travel surface, helping to conserve energy. One's uninjured foot, hands, arms and the gluteus maximus all assist in supporting one's weight. The said leg cradle supports the injured limb or partial limb. The said padded grip bars give said person proper dynamic joint alignment facilitating proprioception and more stable foot placement while ambulating. This said ergonomically designed frame solves a long standing problem of being able to ambulate with little effort and at the same time being able to have a strong stable stance with balance that allows for proper joint positioning. Your body becomes properly aligned using the said frame. The joints, muscles and tendons are working in a more natural position, which promotes faster healing because of the user's ability to be able to extend and flex the uninjured limb and

when appropriate the injured limb, helping to maintain muscle mass and lessening atrophy. Being able to have extension and flexion helps to promote healing. The walking device may be used in a number of different ways which include helping assisting one to rise from a seated position, using like a traditional walker with hands on seat and handle grip bars for stability, going up or down stairs, and straddling the walker frame and seat assembly and resting upon seat. The user is able to stand at a cabinet and have the widely spaced hand grip bars rest against the vertical surface giving the user the use of his hands to do work such as preparing food, brushing one's teeth or simply pouring a cup coffee.

While the ergonomically designed walker frame provides support for one's physical structure, it also is an exercise device that has far-reaching benefits. This device makes it possible for people that have had a leg amputation to be able to ambulate while they're waiting for their prosthesis to be fitted making it possible for the remaining leg to maintain physical strength and flexibility. A more positive mental state is possible as the user is able to stand at the same height as before the amputation occurred. This device may also be used after an infection in the injured stump during which time the prosthesis cannot be used. Previously the amputee had to rely on a wheelchair or crutches until the swelling went down and the infection was gone. This can be devastating mentally. The ergonomic walker frame provides a better means for ambulation and frees up the hands to do meaningful work when resting alongside a vertical surface.

An individual who has lost a limb and who is not a good candidate for prosthesis may use the ergonomic walking frame for an extended period of time. It would give the individual a user-friendlier ambulatory device than crutches with less physical strain on the upper body.

2. The walker as claimed in claim 1 wherein the said padded hand grip bars are adjustable by means of the cap screws located at the lower end of the grip bar, which allows for tightening around the tapered tubular walker frame hand grips, located at the uppermost forward ends of the said offset frame support post and said offset seat support post extending outwardly from two opposite sides of said walker in selected

axial alignment providing a means for improving proprioception of said stabilization foot by means of hands and wrists joints improving balance.

3. The walker as claimed in claim 1 wherein said adjustable seat assembly at top vertical end of V-shaped seat support post with offset positioned seat provides lateral and forward and aft balance of said person's mass over said stabilization foot.
4. The walker as claimed in claim 1 wherein threaded frame spacers vary in length depending on the lateral balance required for the individual user and the width of the stabilization foot providing a means for altering the lateral balance of the frame.
5. The walker as claimed in claim 1 wherein a safety locking collar with control knob and bolt assembly tightens firmly against inside of said stabilization foot support tube and the offset frame support post, providing a second means of attachment between these two posts, and further minimizing wear on said height adjustment spring button.
6. The walker as claimed in claim 3 wherein said offset frame support post with stabilization foot assembly works in conjunction with the seat support post assembly to provide lateral balance providing a means for the uninjured foot to return to the traveled surface predictably.
7. The walker as claimed in claim 1 wherein said stabilization foot is comprised of energy absorbing and releasing foam with a stabilization plate between foam and rubber tread for improved torsion stability promotes lateral forward and aft stability.
8. The walker as claimed in claim 1 wherein welded reinforcement tubes provide a means for strengthening the support tube and the seat support tube, providing additional strength for attaching said support members together without distorting these tubular structures.
9. The walker as claimed in claim 1 wherein the said leg cradle support pivot flange assembly with degree markings, cap head bolts and nut assembly with leg cradle support tube assembly are attached to walker tubular frame by means of button head bolts which thread through the reinforcement tubes into female frame spacers.
10. The walker as claimed in claim 1 further comprising the said adjustable leg cradle support tube with spring button assembly located in the leg cradle adjustment barrel with holes for height adjustment of said leg cradle support tube, attaches to pivoting leg

cradle bracket at uppermost end of leg cradle support tube by means of said button head bolts and Nylock® nut.

11. The walker as claimed in claim 1 wherein the said padded leg cradle which supports the injured limb may have no strap or a Velcro® strap or a breakaway safety buckle strap to secure one's injured limb or stump to walker frame, depending on one's injury.

12. The walker as claimed in claim 1 wherein this said ergonomically designed walker frame with stabilization foot promotes natural joint positioning with extension and flexion of leg joints providing a more stable and natural stance, helping to minimize atrophy of lower limb extremities and thus decreasing rehabilitation time.

13. The walker as claimed in claim 1 wherein this said ergonomically designed walker frame with stabilization foot promotes natural joint positioning with extension and flexion of leg joints providing a more stable and natural stance can in selected cases allow for partial weight bearing and through adjustments an increasing amount of weight bearing as indicated thus decreasing or eliminating atrophy during healing while being very mobile.

14. The walker as claimed in claim 1 wherein this said ergonomically designed walker frame with stabilization foot promotes natural joint positioning with extension and flexion of leg joints providing a more stable and natural stance is important for all patients but particularly for those who work or are involved in sports making an earlier return to activity's possible.

15. The walker as claimed in claim 1 wherein this said ergonomically designed walker frame with stabilization foot is more stable than traditional crutches because the user has more control over the device by using the grab bars thus minimizing slipping of the stabilization foot.

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